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| 10/617,233 | 07/11/2003 | Toshiaki Hirano | 041514-5395 | 2330 |

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EXAMINER

LIN, JAMES

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| ART UNIT | PAPER NUMBER |
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1762

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,233

Applicant(s)

HIRANO ET AL.

Examiner

Jimmy Lin

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/03, 6/30/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 21-27 in the reply filed on 7/13/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Interpretation

2. Given the broadest reasonable interpretation of "outside said display area" (claim 1), anywhere not directly inside the display area can be considered to be outside.
3. Given the broadest reasonable interpretation of "display area", individual pixels can be considered a display area since pixels display different colors.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 24 and 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitations of 50-size, 55-size, and 60-size are indefinite. A "size" is not a specific unit and is not defined in the specification. A 50-size can mean either 50 nm, 50 km, etc. For the purpose of this examination, the term "size" will be interpreted to be inclusive of any unit.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144).

Miura discloses a method of making a plasma display panel [0001], the method comprising:

feeding a substrate in a first direction in a vacuum atmosphere (Fig. 1; [0015]);

heating and evaporating a plurality of evaporation sources 14a,b [0046] at least one of which is located outside the display area in a second direction perpendicular to said first direction, said evaporation sources being positioned facing the display area of a substrate 12 (Fig. 1).

Miura teaches a method of making a PDP by evaporation, but does not explicitly teach a step of forming a protection film on the substrate of the PDP. However, Nishiki teaches a method of making a PDP (abstract), wherein a protection film can be formed by evaporation (col. 10, lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed a protection film on the substrate of Miura because Nishiki teaches that a protective film increases the lifetime of the PDP.

Claim 22: Nishiki teaches that the protection film is formed by evaporation (col. 10, lines 1-3).

Claim 23: The first and second line can be the same line (i.e., the line perpendicular to the plane of the substrate), thereby having an angle of zero.

8. Claims 21-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820).

Komada teaches a method of making a plasma display panel [0187]-[0190], including the step of forming a gas barrier film (i.e., a protection film) (abstract), the method comprising:

feeding a substrate 50 in a first direction in a vacuum chamber 302;

heating and evaporating an evaporation source located outside the display area in a second direction perpendicular to the first direction, said evaporation source being positioned facing the display area of the substrate ([0222]-[0223]; Fig. 13).

Komada does not explicitly teach a plurality of evaporation sources. However, Fumihiro teaches that a plurality of vapor sources can be used in the vapor deposition of a PDP (abstract; Fig. 3). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a plurality of evaporation sources in the method of Komada because Fumihiro teaches that multiple evaporation sources are suitable for depositing films for a PDP.

Claim 22: Komada teaches that the gas barrier film (i.e., a protection film) is formed by vacuum evaporation [0222]-[0223].

Claim 23: The first and second line can be the same line (i.e., the line perpendicular to the substrate), thereby having an angle of zero.

Claim 25: Komada teaches using a web substrate ([0222], Fig. 13), but does not explicitly teach that the substrate has at least three display areas. However, the continuous web used in the process of Komada would not be the final product. The continuous web would be too large to have practical use as a PDP. One skilled in the art would obviously cut the web into a predetermined size. In addition, Komada intends to use a continuous web so that the benefits of web processing may be used. One of the benefits of web is the ability to manufacture multiple products onto a single substrate, thereby increasing the efficiency and throughput. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to formed at least three display areas on the continuous web. One would have been motivated to do so in order to cut the web into a useable and practical size.

9. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of the admitted prior art.

Claim 24: Miura and Nishiki are discussed above, but does not explicitly teach that the substrate has at least two display areas each having a size of 50-size or greater. However, the Applicant teaches that it is known in the art to deposit onto such a substrate (pg. 4, line 28 – pg. 5, line 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to have deposited onto a substrate having two display areas each having a size of 50-size or greater in the method of Miura and Nishiki. One would have been motivated to do so in order to increase the production and efficiency of the process.

Claim 25-26: Miura and Nishiki are discussed above, but does not explicitly teach that the substrate has at least three display areas or that the display area can be a size of 55-size or greater. However, the Applicant teaches that it is known in the art to deposit onto such a substrate and such a display area (pg. 4, line 26 – pg. 5, line 4). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used substrates having three display areas and display areas of 55-size because the Applicant teaches that such substrates and display areas are suitable in the method of making a PDP.

10. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of Konishi et al. (5,957,743).

Miura and Nishiki are discussed above, but does not explicitly teach that the display area can be a size of 60-size or greater. However, Konishi teaches that plasma displays can have up to a size of 60 inches (col. 1, lines 57-62). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have made a display area of 60 inches with a reasonable expectation of success because Konishi teaches that such plasma display sizes are capable of being produced and that such sizes are suitable for plasma displays.

11. Claims 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820), as applied to claim 21 above, and

Art Unit: 1762

further in view of Konishi et al. (5,957,743) for substantially the same reasons as applied to claims 26-27 above.

12. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of Choi et al. (2002/0063525).

Miura and Nishiki are discussed above, but does not explicitly teach that the substrate can have at least three display areas. However, Choi teaches a method of making a PDP [0002], wherein the substrate has at least three pixels (i.e., display areas) (Figs. 6, 9, and 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed at least three pixels on the substrate. One would have been motivated to do so in order to form a PDP of a desirable size.

Miura, Nishiki, and Choi do not explicitly teach that the pixels must be at least 60-size or greater. However, the pixels must be larger than 60 nm in size because the pixels must be larger than a few particles of compounds. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed pixels having a size of at least 60 nm because the pixels are made up of a plurality of particles that, when bonded together, must be longer than 60 nm.

13. Claims 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820), as applied to claim 21 above, and further in view of Choi et al. (2002/0063525) for substantially the same reasons as applied to claims 24-27 above.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki et al. (5,770,921) teaches the vapor deposition of MgO.

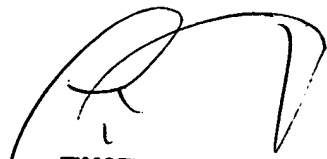
Art Unit: 1762

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Thursday 8 - 5:30 and Friday 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/2/06



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER